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This report surveys the existing physical, social, and land use characteristics of the unincorporated areas of Pasquotank County. It provides a basis for preparing comprehensive land development policies and plans at some future date.

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INTRODUCTION

Background of the Survey

In January, 1973, the Pasquotank County Commissioners discussed some planning work proposals for Fiscal Year 1973-1974 with the Division of Community Services of the North Carolina Department of Natural and Economic Resources. From this contact a set of objectives were developed which included planning assistance for base mapping, technical assistance with codes, revision of subdivision regulations, and the preparation of a land use study for the county. This study will review and update the existing land use data that was examined in a 1969 study performed by Rivers and Associates of Greenville, North Carolina. When appropriate, references in this report will be made to the Rivers study to draw attention to the changes that have developed since 1969.

Objectives

The objective of the survey set by the agreement for planning services was to prepare a land use map of the occupied and vacant land in the county and a text describing the characteristics and changes in each major category of land use. Thus the land use survey and analysis recognizes existing land use by showing the areas now developed for residential, commercial, industrial, and other purposes.

Having a visual explanation of present conditions, the Board of County Commissioners can anticipate future land uses while attempting to answer such questions as when and where should such county facilities as the courthouse, schools, health centers, fire stations, etcetera be located? How much space will be required for each? How many sites for future county facilities should be acquired and protected until they are needed? Should the county undertake construction of water and sewer systems in rural areas? If so, where should they be located and for what capacities should they be designed?

The answers to these questions and others like them lie in the preparation of a series of studies in which this existing land use survey and analysis is the first element. Subsequent work should focus on a land development plan, a detailed population and economic study, and a community facilities plan. In addition, as progress is made towards planning the county's future growth, future technical assistance should be provided on any necessary revision and addition to codes or other planning projects.

NATURAL AND SOCIAL CHARACTERISTICS

Location

Pasquotank County offers a proximate location to the Norfolk-Chesapeake-Portsmouth area, being only five miles south of the Chesapeake County, Virginia, limits. (Figure 1) The accompanying county location map shows the area bounded by the Albemarle Sound on the south, the Pasquotank River on the east, and the Little River on the west. At the northern boundary there are Gates and Camden Counties, North Carolina.

The county's principal incorporated area, Elizabeth City, is located approximately in the middle of the county on the Pasquotank River. Smaller unincorporated towns and places include Weeksville, Nixonton, Mount Hermon, Morgans Corner, Lynch's Corner, and Pasquotank. (Figure 1)

This area is within 45 minutes driving time to downtown Norfolk and it is no more than 30 minutes from most points in the county to the U.S. Coast Guard Airport below Elizabeth City. To the north, Highway U. S. 17 connects the county to Norfolk and other points further north via the Chesapeake Bay Bridge and Tunnel. To the south Highway U. S. 17 becomes the Ocean Highway going to Florida. Highway N. C. 158 is the major east-west artery, linking Elizabeth City with the cities of the northern Piedmont crescent some 125 miles west and to shore points immediately to the east. In addition to its air and highway facilities, Pasquotank County has north-south rail service to other cities along the eastern seaboard and navigable waterways to Chesapeake Bay via the Dismal Swamp Canal.

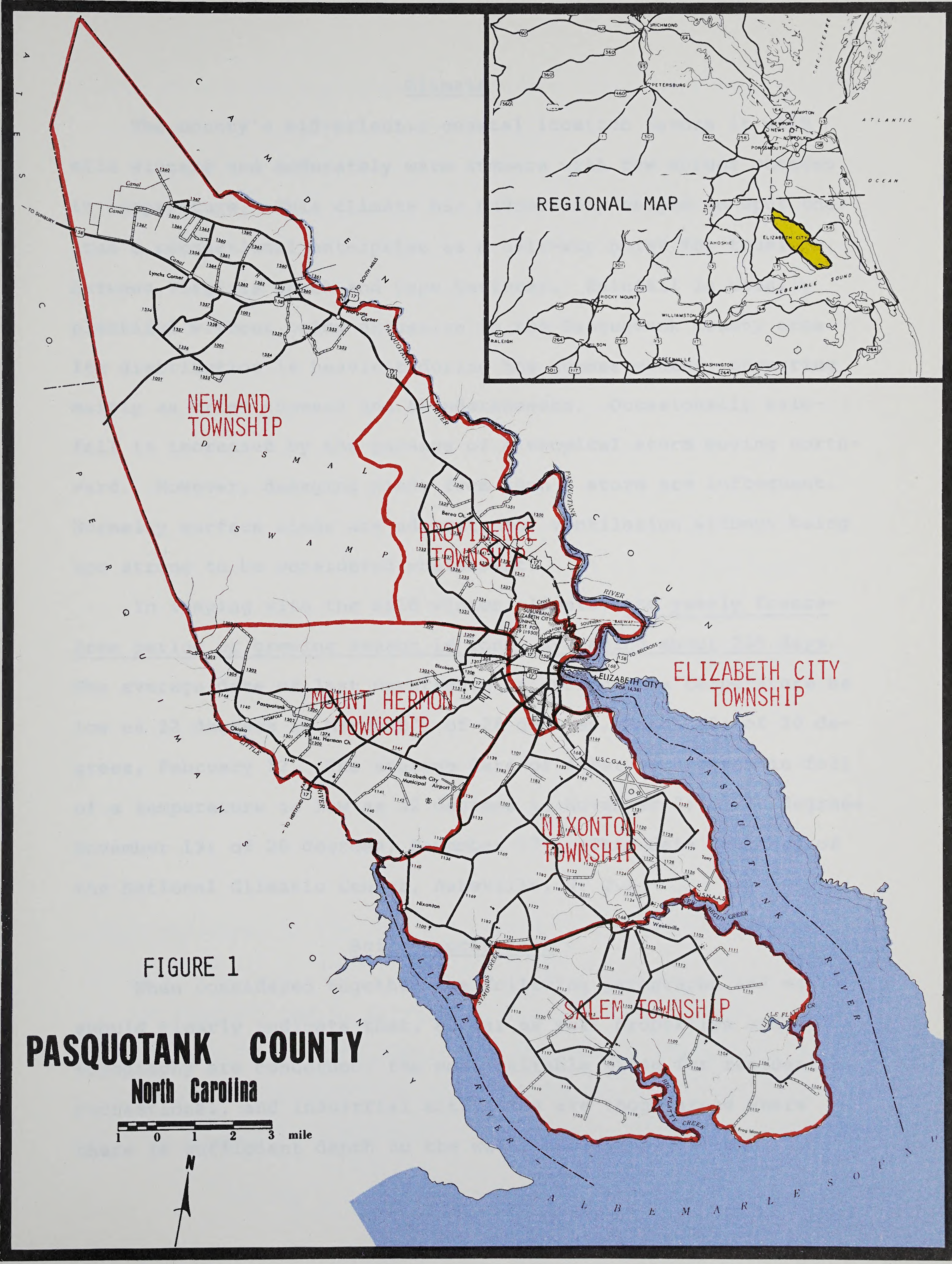

FIGURE 1

PASQUOTANK COUNTY

North Carolina

Climate

The county's mid-Atlantic coastal location favors it with mild winters and moderately warm summers with few abrupt changes in temperature. This climate has undoubtedly helped to spur the area's recreational enterprise as a half-way point for tourism between Virginia Beach and Cape Hatteras. Rainfall is usually plentiful without being excessive in the Pasquotank County area. Its distribution is heaviest during the summer months, occurring mainly as brief showers and thundershowers. Occasionally rainfall is increased by the passage of a tropical storm moving northward. However, damaging winds from such a storm are infrequent. Normally surface winds are adequate for ventilation without being too strong to be considered unpleasant.

In keeping with the mild winter climate, the yearly freeze-free period or growing season is long, averaging about 225 days. The average date of last occurrence in spring of a temperature as low as 32 degrees is March 27; of 28 degrees, March 12; of 20 degrees, February 12. The average date of first occurrence in fall of a temperature as low as 32 degrees is November 9; of 28 degrees, November 19; of 20 degrees, December 17. (This data courtesy of the National Climatic Center, Asheville, N. C.)

Soil Associations

When considered together the following paragraphs and map should clearly indicate that, as far as soil properties and topography are concerned, the most suitable sites for residential, recreational, and industrial activities are those areas where there is sufficient depth to the water table, only slight

foundation and footing problems, slight or moderate susceptibility to erosion, and well or moderately well-drained soils.

In general, the interaction between soil types and topography in Pasquotank County falls short of the most suitable characteristics for land development described above. The area's nearly level terrane, high water table, and poorly drained soils make large scale urban development a marginal proposal without water and sewer systems. However these soil properties pose few limitations for a variety of agricultural opportunities provided that careful management is given to areas under cultivation. (Figure 2)

Caution should be exercised in using the following information for detailed or small area interpretations. The scale on which the soil resources were recorded is such that it is not possible to evaluate small tracts of land in any one geographic area of the county. As an example, an area on the map of 15,000 acre size may be listed as "unsuitable" for residential development with septic tank disposal systems. However, within this area there may be several hundred acres of soils that would be suitable for residential development with septic tank disposal systems. These interpretive maps should be used as guides to evaluate the dominant suitability of land areas for specific land use. A detailed soil survey performed by the USDA Soil Conservation Service for the county would be required to determine the degree of limitations for the selected use of small tracts of land. The scale limitations of the soil survey used for these interpretations do not eliminate its usefulness for planning and implementing a sound land use policy for the county. For example, if the planning board

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SOIL ASSOCIATIONS AND SUITABILITY FOR DEVELOPMENT: PASQUOTANK COUNTY, N. C.

NUMBER	SERIES GROUPINGS
1	PASQUOTANK - BARCLAY - WEEKSVILLE
2	BERTIE - OTHELLO
3	OTHELLO - BERTIE - DRAGSTON
4	POCOMOKE - PORTSMOUTH
5	BAYBORO
6	ELKTON - BLADEN
7	MUCKY PEAT - SWAMP

Soil Association Number	TYPE OF DEVELOPMENT				
	Residential	Recreational	Industrial	Agricultural	Landfill
1	Marginal	Marginal	Marginal	Suitable	Unsuitable
2	Marginal	Marginal	Marginal	Suitable	Unsuitable
3	Marginal	Marginal	Marginal	Suitable	Unsuitable
4	Unsuitable	Marginal	Marginal	Suitable	Unsuitable
5	Unsuitable	Marginal	Marginal	Marginal	Unsuitable
6	Unsuitable	Marginal	Marginal	Marginal	Unsuitable
7	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable

Source: USDA-SCS Soil Survey of Pasquotank County

Note: Soil ratings of "suitable, marginal, and unsuitable" that are used here are based on the characteristics of the soils and the related costs of developing the land for a specific use. Any soil area may be developed for any use if the capital is available to perform the necessary modifications of the land area in question.

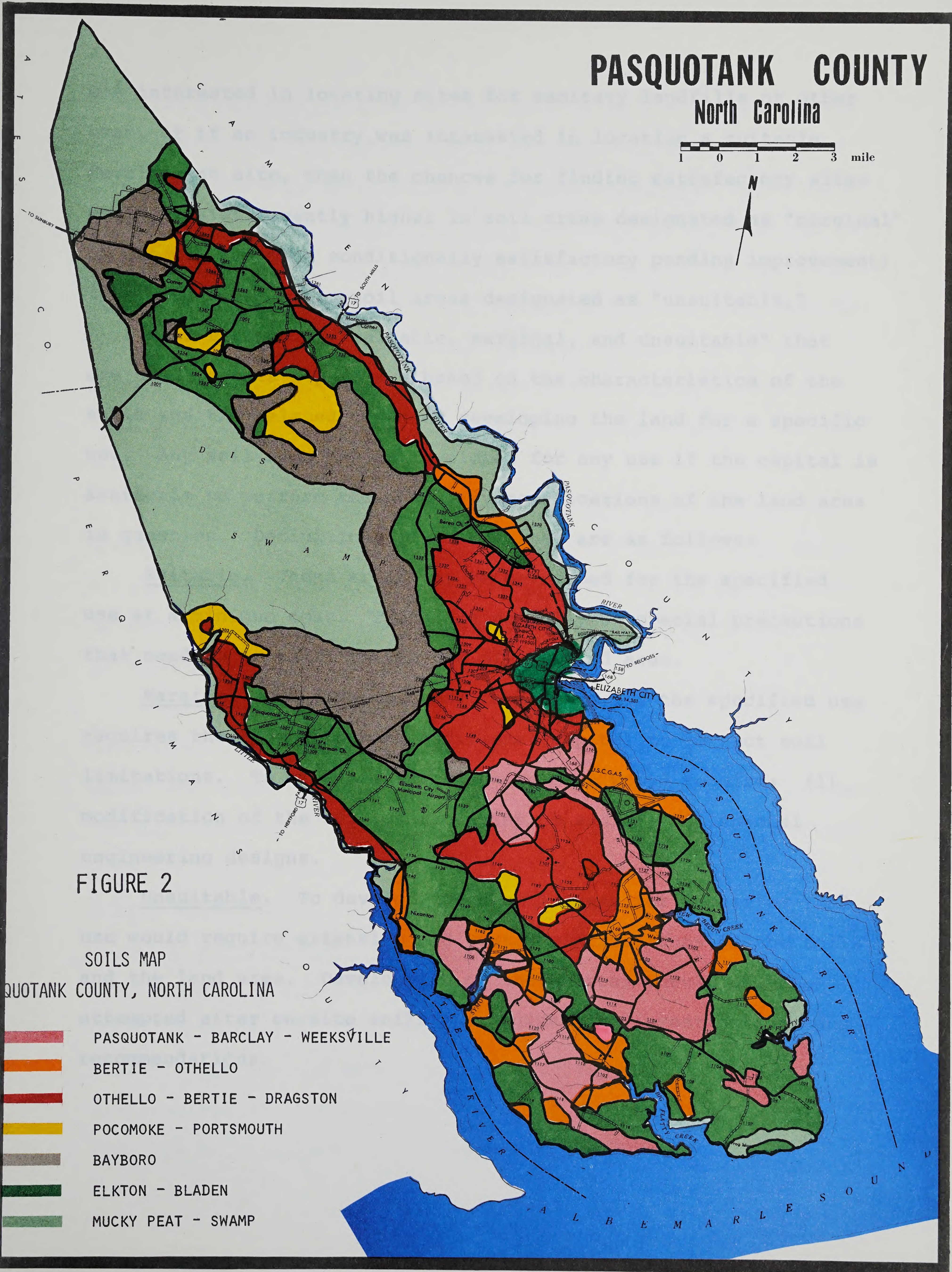


FIGURE 2

SOILS MAP

PASQUOTANK COUNTY, NORTH CAROLINA

🟥 PASQUOTANK - BARCLAY - WEEKSVILLE

🟧 BERTIE - OTHELLO

🟥 OTHELLO - BERTIE - DRAGSTON

🟨 POCOMOKE - PORTSMOUTH

⬜ BAYBORO

🟩 ELKTON - BLADEN

🟩 MUCKY PEAT - SWAMP

was interested in locating sites for sanitary landfills or other uses, or if an industry was interested in locating a suitable development site, then the chances for finding satisfactory sites would be significantly higher in soil areas designated as "marginal" on the map (meaning conditionally satisfactory pending improvement) than they would be in soil areas designated as "unsuitable."

Soil ratings of "suitable, marginal, and unsuitable" that are used in this report are based on the characteristics of the soils and the related costs of developing the land for a specific use. Any soil area may be developed for any use if the capital is available to perform the necessary modifications of the land area in question. Definitions of the ratings are as follows:

Suitable. These areas may be developed for the specified use at a minimum cost. There are normally no special precautions that need to be taken in the use of the land area.

Marginal. To develop these land areas for the specified use requires the expenditure of additional capital to correct soil limitations. To obtain a satisfactory site would require: (1) modification of the soil characteristics and/or, (2) special engineering designs.

Unsuitable. To develop these soil areas for specified land use would require extensive and costly modifications of the soils and the land area. Development of these areas should only be attempted after on-site soils and engineering investigations and recommendations.

The principal soil series are grouped into seven soil associations and the interpretation of soil ratings for different land uses shown in the accompanying illustration are based upon the Soil Survey of Pasquotank County prepared by the USDA and the Comprehensive Water and Sewer Study done by Rivers and Associates. Each of these publications ought to be examined for more detailed explanations of the county's soil properties and limitations.

The following paragraphs interpret the county's seven soil associations according to their dominant characteristics for land use:

(1) Pasquotank-Barclay-Weeksville. This soil association covers about eight percent of the county and is generally in the southern half of the area. Development limitations are moderate to severe because of slow permeability, shrink-swell potential, or high water table.

(2) Bertie-Othello. Soil associations of this variety occur principally in the southern portions of the county, occupying about six percent of the total area. Development limitations are the same as that of soil association (1) except that this group does not have water-holding capacity as favorable as the first group, making crops liable for injury in dry seasons.

(3) Othello-Bertie-Dragston. This soil group is mostly in the central and southern portions of the area, and comprises about 14 percent of the county. This group forms an umbrella over a wide range of specific soils having varying qualities of drainage but all occupying only a small proportion of the total area and being generally unsatisfactory for urban land uses.

(4) Pocomoke-Portsmouth. The Pocomoke-Portsmouth soil association covers about four percent of the county in widely scattered pockets throughout the area. It has severe limitations due to slow permeability, high water table, high shrink-swell potential, and flooding.

(5) Bayboro. This type of soil is present in about 12 percent of the county, and it has the same limitations as the Pocomoke-Portsmouth soil association. In the accompanying map the Bayboro soil type is the predominant variety surrounding the Dismal Swamp.

(6) Elkton-Bladen. This soil association comprises about 29 percent of the county, generally in the peripheral areas of the coastal plain. Its subsoils are fine textured and very slowly permeable to water, thus sharing the characteristics of soil associations (4) and (5).

(7) Mucky Peat-Swamp. The Mucky Peat-Swamp soil association is made up of mucky peat, swam, and Bibb soils. It covers about 27 percent of the county. Its limitations are very severe to severe due to flooding or special drainage problems in floodplain areas. There is also instability of the alluvial soils. This soil is confined to the Dismal Swamp section of the county and to areas along the Pasquotank River north of Elizabeth City. Because of its extremely poor drainage characteristics, this type of soil is virtually unsuitable for any kind of development.

Hydrology

Pasquotank County is currently well-endowed with a more than ample supply of water. Its surface waters fall within the Pasquotank River and Little River basins which drain southward into the Albemarle Sound. Private and municipal water supplies draw upon five aquifers underlying the county, flowing from wells from depths of 8' to 200'.

Surface Water Characteristics

The suitability of surface waters for various uses has been cateogrized in North Carolina according to a system of water quality classifications, which rank order fresh and tidal salt waters according to their levels of pollution. Higher classifications which denote, for example, water for food processing can include lower quality uses such as waste disposal, but not without degrading the higher classification to a lower standard. Lower water quality classifications can only be raised to higher classifications through control and treatment of effluents. These nine classifications are depicted in the form of a pyramid and are described in Table 1.

The following illustration (Figure 3) reveals that there are only four classifications for surface waters out of a possible nine in Pasquotank County. Of these four, Class SB has the highest water quality. These Class SB waters designate a portion of the Pasquotank River from about the southern limits of Elizabeth City to the mouth of New Begun Creek. For purposes of planning adjacent land uses, this segment of the Pasquotank River represents an optimal recreational area for bathing activities.

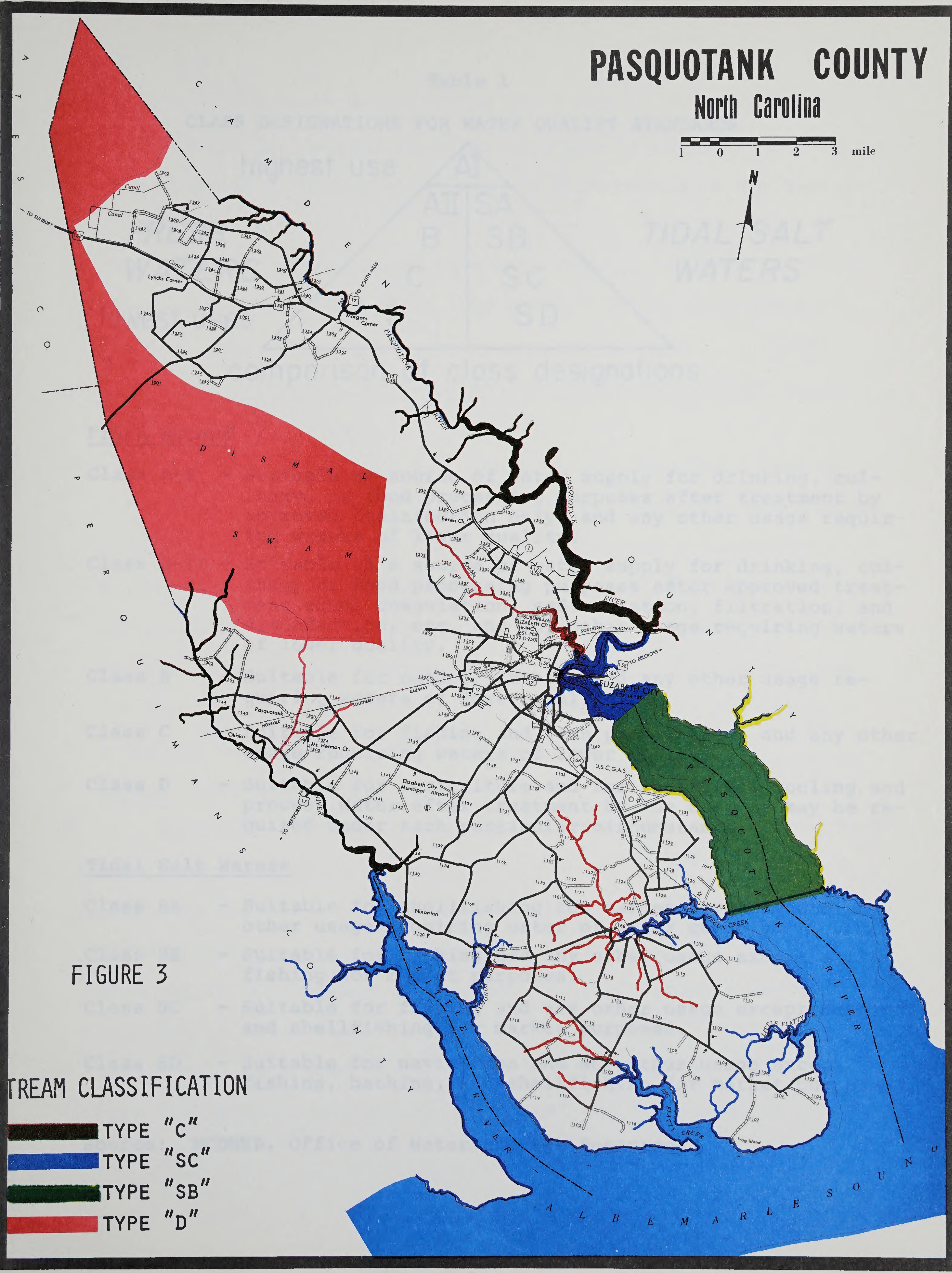


FIGURE 3

STREAM CLASSIFICATION

⬛ TYPE "C"

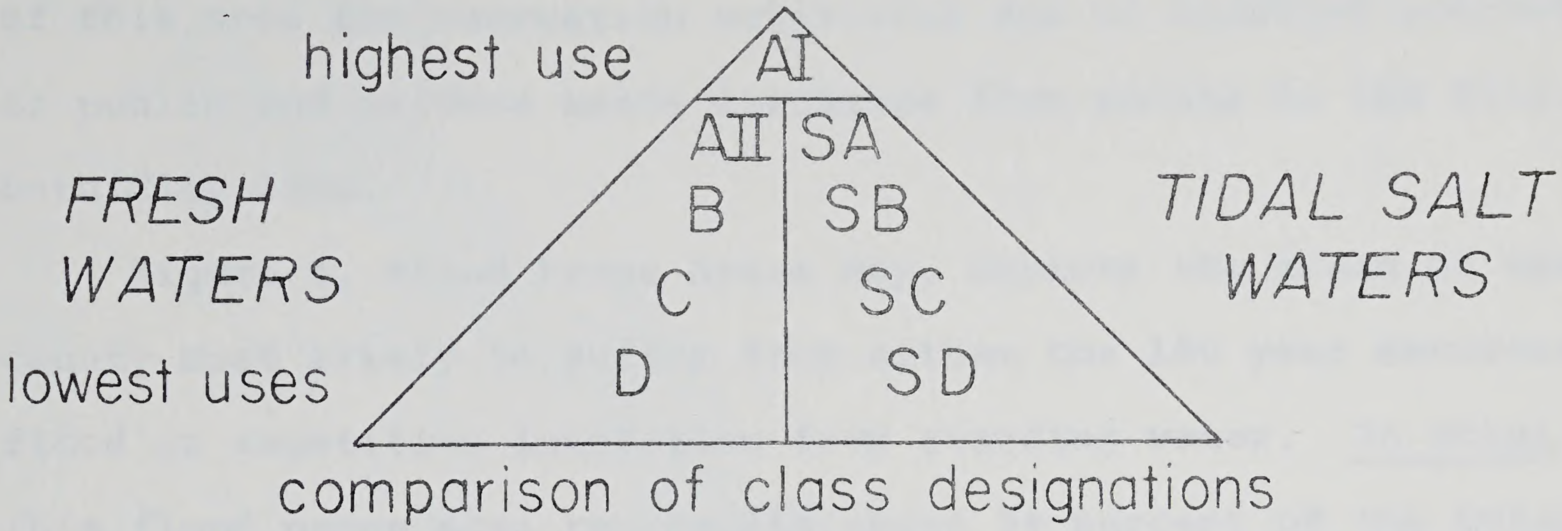
🟦 TYPE "SC"

🟩 TYPE "SB"

🟥 TYPE "D"

Table 1

CLASS DESIGNATIONS FOR WATER QUALITY STANDARDS



Fresh Waters

Class A-I - Suitable as source of water supply for drinking, culinary, or food processing purposes after treatment by approved disinfection only, and any other usage requiring waters of lower quality.

Class A-II - Suitable as a source of water supply for drinking, culinary or food processing purposes after approved treatment equal coagulation, sedimentation, filtration, and disinfection, etc. and any other usage requiring waters of lower quality.

Class B - Suitable for outdoor bathing and any other usage requiring waters of lower quality.

Class C - Suitable for fishing and fish propagation, and any other usage requiring waters of lower quality.

Class D - Suitable for agriculture and for industrial cooling and process water after treatment by the user as may be required under each particular circumstance.

Tidal Salt Waters

Class SA - Suitable for shellfishing for market purposes and any other usage requiring water of lower quality.

Class SB - Suitable for bathing and any other usage except shellfishing for market purposes.

Class SC - Suitable for fishing and any other usage except bathing and shellfishing for market purposes.

Class SD - Suitable for navigation and any other usage except fishing, bathing, and shellfishing for market purposes.

Source: NCDNER, Office of Water and Air Resources.

However, significant difficulties may arise in the preservation of this area for recreation activities due to existing sources of public and private waste discharge from points in the Elizabeth City area.

Figure 4, Flood Prone Areas Map, depicts the areas of the county most likely to suffer from either the 100 year recurring flood or repetitive inundation from standing water. In total, this flood prone area represents about 54 percent of the total land area of the county.

In interpreting this map, the same care should be used as was required for the soil associations map, such that small area interpretations cannot be taken accurately from a large-scale map. Boundary lines continually vary with changes from construction or agricultural work and local recollections of high water marks. Nevertheless this information serves both as a jumping-off point for small area analysis and as an indicator of the magnitude of flood and drainage problems in this area.

Ground Water Characteristics

Five aquifers underlie the county of which three (Upper Yorktown, Lower Yorktown, and Beaufort) supply local residents with a plentiful source of drinking water. However, while abundant, ground water in this area is usually hard and in need of treatment before consumption. Wellheads are predominantly driven although artesian wells can be found in scattered locations. Yields will vary from two to 60 gallons per minute, depending upon the location and depth of the well and its manner of operation.

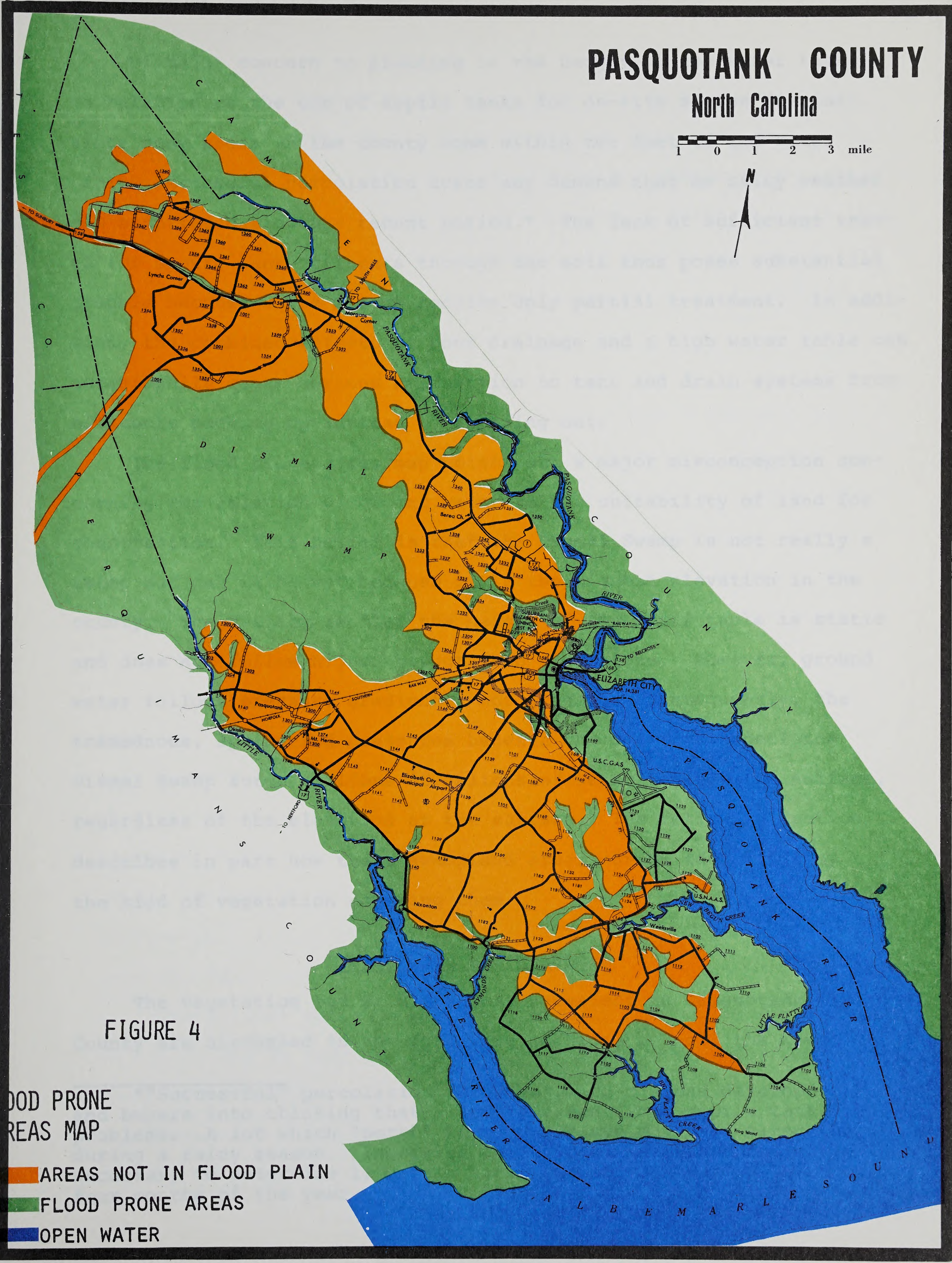


FIGURE 4

FLOOD PRONE AREAS MAP

🟧 AREAS NOT IN FLOOD PLAIN

🟩 FLOOD PRONE AREAS

🟦 OPEN WATER

Of major concern to planning is the height of the water table in relation to the use of septic tanks for on-site sewage disposal. Since many areas in the county come within two feet of the water table, successful percolation tests may demand that no rainy weather has occurred during any recent period.* The lack of sufficient travel for septic tank effluents through the soil thus poses substantial trouble because waste waters receive only partial treatment. In addition, the combined effects of poor drainage and a high water table can occasionally cause serious malfunction to tank and drain systems from effluents backing up instead of flushing out.

The flood prone areas map points out a major misconception concerning the relation of ground water to the suitability of land for construction. This belief is that the Dismal Swamp is not really a swamp nor can it be wet because it is the highest elevation in the county. The fallacy is that the height of the water table is static and does not follow higher topographic elevations. However, ground water follows pressure gradients, not gravity. Consequently, the tremednous, spring-fed pressures beneath the aquifers underlying Dismal Swamp force billions of gallons of water towards the surface, regardless of the elevation at the surface. The following section describes in part how these swampland areas can be identified by the kind of vegetation covering them.

Vegetation and Wildlife

The vegetation and wildlife most prevalent in Pasquotank County are discussed in the following sections in only the most

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*"Successful" percolation tests can also mislead developers and buyers into thinking that a lot is exempt from septic tank problems. A lot which "perks" in a dry season may fail altogether during a rainy season. Inquiries among local residents are often necessary to determine if septic tanks cannot work during three or four months of the year.

general terms. The reason for this is that a detailed analysis can be prepared only after a more careful survey is conducted than what is offered here. The vegetation section considers the county's common horticulture and native plant species, and the wildlife section deals with the principal livestock and native species of animals. A separate section on farm characteristics is discussed in the following chapter.

Vegetation

As a preceding section on soil associations discussed, soil information often plays a primary role in organizing and determining land use allocations. The soils of Pasquotank County offer extensively suitable areas for several predominant crops, however difficult drainage conditions make yields fluctuate widely. The area is presently characterized by a row crop economy dominated by corn, soybeans, potatoes, and cabbage.

From a planner's point of view, one of the more significant descriptions of the county's horticulture is provided by the USDA Soil Conservation Service in its Pasquotank County Soil Survey. This publication ought to be consulted for its elaboration on tables of total acreage of each vegetation type, its percentage of all vegetation acreage, and its discussion on soils and farm management. All of this information is very helpful in evaluating land use decisions.

The largest and most prominent area of natural vegetation in the county is that occupied by the Dismal Swamp. A second category of geologic features having striking scenic value is the acreage of freshwater marshes bordering Albemarle Sound, the

Pasquotank River, and other smaller streams. Many of these wetland areas already shown as flood prone survive intact because of their limitations for agriculture or their irregular shape. However, they possess exceptional value as wildlife refuges, beingheavily overgrown with numerous varieties of broadleaf trees, pines, scrub growth, and aquatic plants. Other heavily wooded areas not in swampland are being brought under intensive management as tree farms by lumber companies with large land holdings principally in Newland Township.

One indication of the suitability of land for residential, commercial, or industrial use can be estimated by the kinds of growth covering the site. This is because where the vegetation varies significantly, the general type of soil normally varies accordingly. The soils of Pasquotank County have developed under three broad types of forest vegetation. The well drained to poorly drained minerals soils have developed under loblolly pine and mixed hardwoods. The very poorly drained swampland has developed under cypress, swamp hardwoods, and some pond pine. The organic soil, Mucky peat, has developed under southern white cedar, swamp hardwoods, and some cypress and pond pine. The color of soil in these different areas is also sometimes felt to be an indication of the height of the water table to the surface, however, no evidence indicates that the water table is generally higher in the darker colored soils than in the light-colored ones of comparable texture and similar drainage. (This information from the USDA Soil Survey.)

Grasslands in the county fall into two categories of pasture: improved and unimproved. These pastures exist at scattered sites,

primarily where soil that is difficult to drain adequately for crops is made useful for grazing. Carpetgrass, Bermuda grass, goosegrass, dallisgrass and clover are the principal plant species in the unimproved pastures. The Soil Conservation Service recommends the improvement of these pastures with the seeding and management of Orchard grass, Ladion clover, or fescue. They also note a trend within the county towards upgrading these unimproved areas.

Wildlife

The significance of livestock in the county as an economic stable has been consistently second to agriculture. Of several species, hogs are the most prevalent. Their value may possibly diminish in the future, especially on the smaller farms, with the development of large-scale corporate farming operations in some of the counties south of Pasquotank.

Swamp and forested areas provide the best habitat for a variety of game and non-game species of birds and animals. Regulating the encroachment of non-farm land developments on natural areas can minimize a limiting factor in the growth trends of these wildlife habitats, especially for game species. Small game such as quail, rabbit, dove, muskrats, and otter abound in the bogs and shallow marshes of the Dismal Swamp while large game such as bear and particularly deer thrive within the wooded areas near swampland. Waterfowl species of duck and goose are only fair at present, however with adequate management a potentially good habitat could substantially increase their numbers. Game animals and hunting areas should be considered an important resource of

the county, which if properly developed and protected can enhance and continue the attractiveness of the county for this form of outdoor recreation. (This information based upon An Appraisal of Potential for Outdoor Recreation, USDA Soil Conservation Service, 1972.)

Commercial and sport fishing in the Pasquotank area is not well known for having record catches over eight pounds, however year after year the area's waters supply adequate numbers of one to five pound perch, crappie, bluegill, and especially bass. Seasonal peaks occur from mid-April to early June and again in September and October. While having only moderate potential compared to that for hunting, area fishing should be valued for its drawing power for tourism from nearby urban centers.

Minerals

Pasquotank County is blanketed by deposits of fine sand and clay near the surface which rarely exceed 60 feet in thickness. Beneath these surficial beds are undetermined quantities of shell, clay, marl, and limestone. The mining of these resources has been extremely limited in this region, and its potential is further constrained by contentions that mining would kill large quanities of fish and destroy plant food and habitats for wildlife. There are large quantities of peat in the Dismal Swamp, but since it is already plentiful in the United States and has no significant demand, it is not thought to be profitable at the present time to process and sell it.

Population and Economy

Pasquotank County's population has grown steadily over the years, although this growth has been consistently behind that of the North Carolina growth rate. (Table 2)

Table 2

POPULATION GROWTH

Pasquotank County and State of North Carolina

	1960-1970	1950-1960	1940-1950	1930-1940	1920-1930
County	+4.7%	+5.3%	+18.4%	+7.4%	+8.3%
State	+11.5%	+12.2%	+13.7%	+12.7%	+23.9%
Difference	-6.8%	-6.9%	+4.7%	-5.3%	-15.6%

Source: U. S. Census

Its 1970 population was 26,824 persons, distributed among six townships. As the following table indicates, the rates of change reflect the growth of suburbia away from Elizabeth City. This is especially evident in the traffic corridor formed by Highway U. S. 17. (Table 3)

Table 3

POPULATION DISTRIBUTION

Townships of Pasquotank County

	1940-1950	1950-1960	1960-1970	1970 Pop.
Elizabeth City	+29.6%	0.00%	-2.3%	15,507
Mt. Hermon	-1.6%	+11.2%	+47.6%	2,352
Newland	+4.8%	+5.9%	+12.1%	1,923
Nixonton	+47.8%	+16.0%	+2.4%	3,135
Providence	+25.8%	+58.7%	+43.8%	2,819
Salem	0.00%	-9.7%	-23.6%	1,088

Source: U. S. Census

Population characteristics concerning age appear to be roughly consistent with North Carolina. (Table 4)

Table 4

MEDIAN AGE

Pasquotank County and State of North Carolina

	under age 18	age 18 - 64	over age 65
County	36.4%	55.5%	8.6%
State	34.6%	57 2%	8.1%

Source: U. S. census

However, in comparing other general characteristics there are significant differences. Thus the black population is more than one and a half times the proportion of blacks to whites in the state, being 38 percent of the total county population compared to 22.2% for the state. This 1970 percentage of black population represents a slight decline from a 1960 percentage of 39.5% as reported in the 1969 River's study.

Economic Data

The following table shows estimates for the size of the labor force in the county as it is distributed among the area's largest employers as well as estimates of product value or value added. While agriculture continues to employ a large segment of the labor force on a seasonal basis, the value of its produce is being superceded by the growth of retail and wholesale trade and government, primarily in the Elizabeth City area. (Table 5)

Table 5

COMPARISON OF LABOR FORCE AND VALUE ADDED

Pasquotank County, N. C.

	Employment	% of Total	Est. Sales or Value Added
Agriculture	550-2300	4%-20%	$20 million (1972 data)
Manufacturing	1500-1800	18%	$8 million (1972 data)
Government	2700-2800	24%	NA
Trade	1900-2000	22%	$66 million (1972 data)

Sources: Elizabeth City Area Chamber of Commerce, Profile of Elizabeth City, North Carolina

N. C. Employment Security Commission, North Carolina Work Force Estimates by County, Area, and State

The distribution and median income levels for families and individuals in the county compares favorably with data for Elizabeth City and the State of North Carolina. While income levels are generally less, differences are not substantial. In the case of median poverty income, the county's average is higher than that for either the state or Elizabeth City. 1970 Census data indicates that 670 families in the county have an annual income between $10,000 and $11,999. This income bracket is the largest of all family income brackets within the county and also the state and Elizabeth City. (Table 6)

Table 6

INCOME DISTRIBUTION

Pasquotank County, Elizabeth City, and North Carolina

	Per Capita Income	% of Families with Income, $10-12,000	% Below Poverty	Mean Poverty Income
County	$2176	10%	20.3%	$2333
Elizabeth City	$2409	10.7%	20.3%	$2283
State	$2492	11.7%	16.3%	$2030

Source: 1970 U. S. Census

LAND USE ANALYSIS

In the same manner in which the natural and social characteristics of the county were discussed, certain land use conditions can be described in terms of a few obvious characteristics and trends. Maps and tables in this section used to describe these conditions ought to be considered as estimates only. Thus, for example, if an illustration depicts three-fourths of Newland Township as being "swamp and forest," it should be interpreted that approximately 60 percent of that area is swampy or forested -- not that 100 percent of that area fits the description. Some differences will also be noted between statistics in the various tables and published census data. Again, these are estimates only and vary because of the use of different survey techniques. Consequently this section's statistics should not be taken at "face value."

The predominant land use in Pasquotank County is that of agriculture, including both horticulture and forestry. This single category comprises over 90 percent of all land areas. Residential land use rates second in size by a considerably smaller percentage --about four percent of the total area. The estimates of acreage for several categories of land use are summarized by township in Table 7 on the following page.

Agricultural Land Use

Agriculture, including forestry, is the largest user of land in the county with approximately 137,600 acres. Approximately 60,450 acres are harvested for crops or left idle for pasture;

Table 7

LAND USE ACREAGE ESTIMATES, PASQUOTANK COUNTY

Townships	Residential	Commercial	Industrial	Public & Semi-Public	Highways	Crops	Swamp & Forest	Total
Newland	1,100	46	0	0	330	12,384	42,075	55,670
Providence	808	42	0	0	209	7,155	8,603	16,630
Elizabeth City	828	182	22	139	625	453	452	2,610
Mt. Hermon	1,006	52	0	0	304	15,654	4,999	21,750
Nixonton	1,255	26	764	847	353	15,341	5,608	23,670
Salem	1,234	18	0	10	330	9,466	15,435	26,230
Totals	6,231	366	786	996	2,215	60,435	77,172	146,560

Sources: USDA aerial photos of Pasquotank County, 1969.
NCDOT Pasquotank County Highway Maintenance Map, 1972.
NER windshield survey, August, 1973.
Land Development Plan: Elizabeth City, N. C., March, 1968.
Pasquotank County Tax Supervisor's Office, May, 1974.

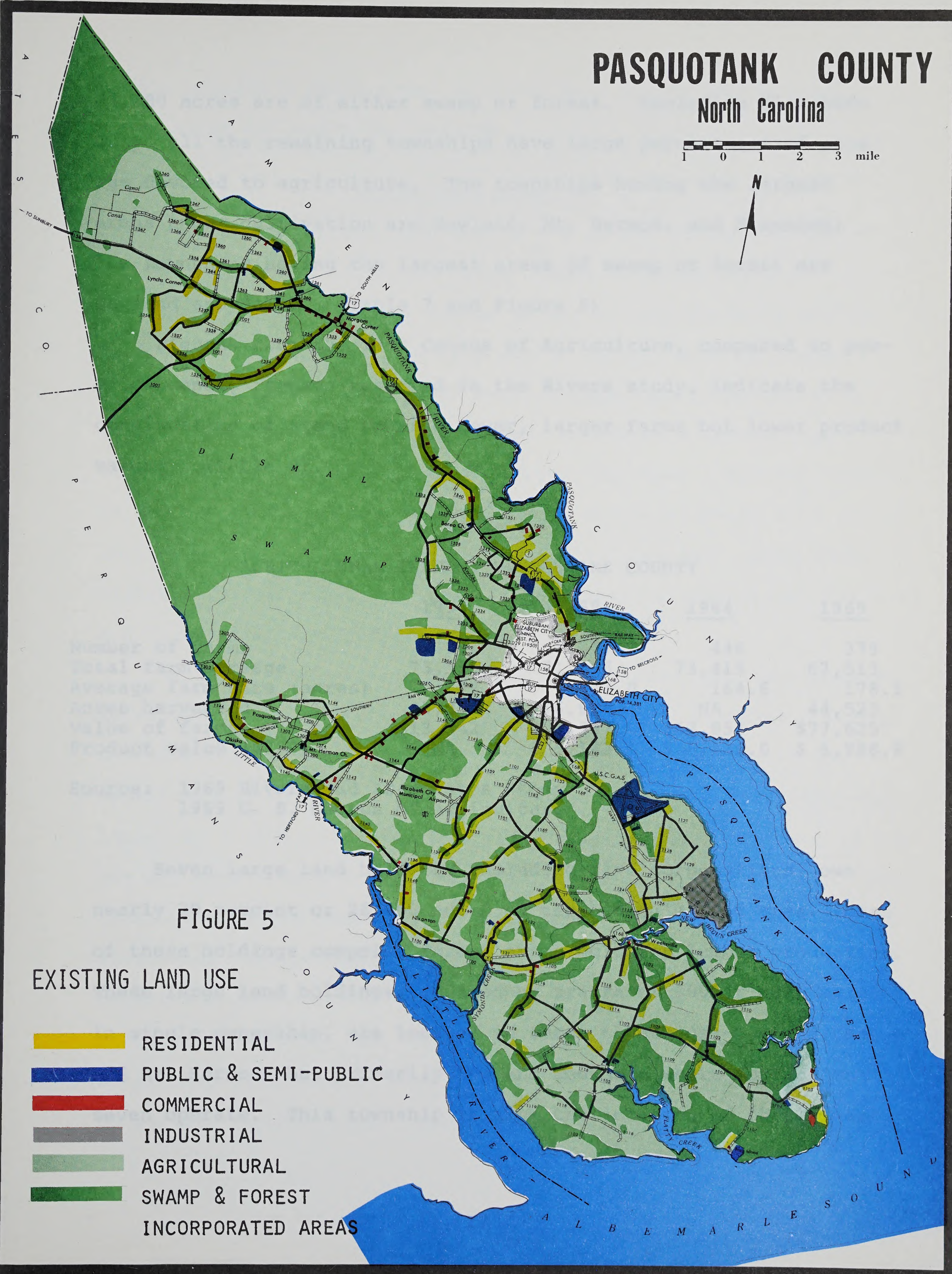


FIGURE 5

EXISTING LAND USE

77,180 acres are of either swamp or forest. Excluding Elizabeth City, all the remaining townships have large percentages of acreage devoted to agriculture. The townships having the largest areas under cultivation are Newland, Mt. Hermon, and Nixonton; the townships having the largest areas of swamp or forest are Newland and Salem. (Table 7 and Figure 5)

Figures from the 1969 Census of Agriculture, compared to previous census figures reported in the Rivers study, indicate the continuation of trend towards fewer, larger farms but lower product values. (Table 8)

Table 8

AGRICULTURAL TRENDS, PASQUOTANK COUNTY

	1954	1959	1964	1969
Number of farms	791	579	446	379
Total farm acreage	73,515	71,196	73,415	67,513
Average farm size (acres)	92.9	123.0	164.6	178.1
Acres harvested	43,236	46.926	NA	44,523
Value of farms	$13,342	$23,347	$53,853	$77,625
Product value ($000)	NA	$ 5,143.1	$ 8,136.0	$ 6,988.8

Source: 1969 Rivers and Associates Study
1969 U. S. Census of Agriculture

Seven large land holders, including five corporations, own nearly 20 percent or 28,400 acres of the county's land area. Most of these holdings comprise forest areas held for lumber production. These large land holdings, defined as tracts of 800 or more acres in single ownership, are located in three townships--Newland, Salem, and Mt. Hermon--but primarily Newland Township where four of the seven operate. This township is also the location of the largest,

single ownership which makes up about half of the 28,400 acres. (Data based on county tax records.)

Residential Land Use

The second largest land use in the county is for residences, totaling approximately 6,200 acres. Most dwelling units are single family homes, although nearly 20 percent of the units tallied in a 1973 windshield survey were mobile homes. Most of these mobile homes were clustered in small groups near Elizabeth City in Nixonton and Providence Townships, providing principal residences for persons working in the area. In other respects, housing in Pasquotank County shares some common characteristics with other rural counties. Its housing is typically "stripped" along paved highways, being widely scattered except near unincorporated villages and Elizabeth City. (Figure 5)

Of major concern is the adequacy of housing, of which physical deterioration is a reliable indicator. The 1973 windshield survey performed by the staff of the Northeastern Field Office of the Department of Natural and Economic Resources counted 719 substandard houses of a total of 3,048 dwelling units surveyed. While this figure for substandard housing represents about 24 percent of all dwelling units in the county, only four percent or 132 units were described as "dilapidated". This means that these 132 houses were physically deteriorated to the point of requiring uneconomic, major structural repairs. The remainder of substandard units were those considered structurally sound but which needed obvious maintenance to curtail further ruin. (Table 9)

Table 9

HOUSING CONDITIONS, PASQUOTANK COUNTY

Township	Units Surveyed	Mobile Homes	Houses	Houses Standard	Houses Substandard
Salem	462	87	375	222	153
Nixonton	451	162	289	151	138
Mt. Hermon	615	86	529	404	125
Elizabeth City*	143	4	139	62	77
Providence	930	150	780	697	83
Newland	447	76	371	228	143
Totals	3,048	565	2,483	1,764	719

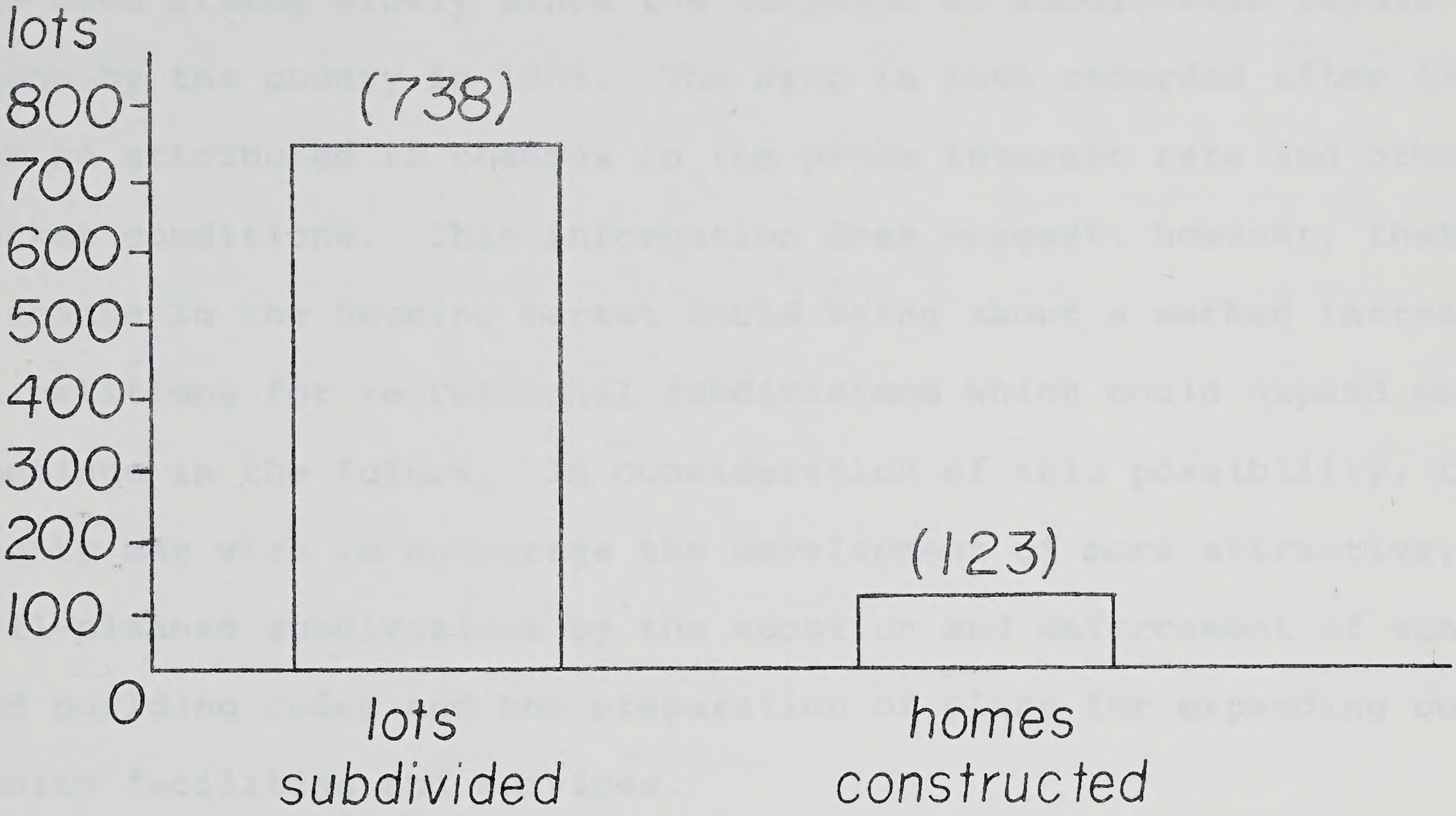
*Extraterritorial areas only

Source: NER survey, Ausust, 1973

Trends in residential development in the county can be gathered from a review of subdivision plats recently recorded. A survey of county tax and plat records in May, 1974, revealed that of 738 lots subdivided since the adoption of subdivision regulations in 1966, only approximately 123 lots had homes constructed on them. This 1:6 ratio of lots subdivided to homes constructed in selected subdivisions is three times greater than the county's natural rate of population growth--about five percent each decade. Consequently, this information suggests that residents are either buying lots for second homes or investment purposes to "trade up" several years from now. The county can anticipate problems arising from people showing up to build upon and occupy these vacant lots, because they will start demanding fire, police, and garbage collection services, and the like. (Tables 10 and 11)

Table 10

COMPARISON OF LOTS SUBDIVIDED TO HOMES CONSTRUCTED IN SELECT SUBDIVISIONS



Source: NER sample survey of Pasquotank County deed and tax records, May, 1974.

Note: Survey dates from 1966 adoption of subdivision regulations to the present.

Table 11

PLATS REVIEWED UNDER SUBDIVISION REGULATIONS FOR PASQUOTANK COUNTY SINCE 1966

Year	Number of Lots	Number of Plats
1966	none observed	none observed
1967	44	2
1968	140	3
1969	186	4
1970	none observed	none observed
1971	175	5
1972	40	3
1973	96	7
1974 (to May)	18	2

Source: NER sample survey of Pasquotank County deed records, May-June, 1974.

Note: Survey does not include subdivisions recorded that fall within the Elizabeth City limits.

Table 11 on the preceding page shows that the number of lots and plats being reviewed by the Pasquotank County Planning Board has been rising slowly since the adoption of subdivision regulations by the county in 1966. The drop in lots recorded after 1971 can be attributed to changes in the prime interest rate and other market conditions. This information does suggest, however, that a change in the housing market could bring about a marked increase in petitions for recreational subdivisions which could expand and continue in the future. In consideration of this possibility, the county may wish to encourage the development of more attractive, well-planned subdivisions by the adoption and enforcement of zoning and building codes and the preparation of plans for expanding community facilities and services.

Commercial and Industrial Land Uses

Commercial and industrial (manufacturing) land uses only occupy about 1,150 acres in the county of a total land area of 146,560 acres. Typical is the country store and gas station located at a rural crossroads. Near Elizabeth City, farm supply and equipment dealers can be found, servicing the local agricultural trade. Along portions of U. S. Highway 17 entering the Elizabeth City area, roadside motels and restaurants cater to the traveling public. The major concentration of commercial land activity is, of course, Elizabeth City which is most likely to remain the center for retail shopping in the area. Elsewhere in the county, commercial property--like residential property--is scattered along major highways. While the rural commercial uses benefit local

residents, attention should be paid to the hazards of traffic congestion which they create along unwidened portions of major arterials. Such an area is the segment of two-lane highway north of Elizabeth City along Route 17, which presently has the highest concentration of accidents and traffic violations of any area in the county. (See following section on roads.) Road widening is an obvious improvement which could be described and illustrated in a Sketch Thoroughfare Plan for the county. In addition, the adoption of zoning can also provide for adequate off-street parking, vision clearance, and minimum building setbacks.

Most industrial sites are located in or near Elizabeth City, with major employment concentrated in lumber, textiles, furniture manufacturing, and civilian employment at the Coast Guard Air Station south of the city. The land use map shown as Figure 5 and the land acreage figures shown as Table 7 only depict the two largest plant sites outside Elizabeth City which are the Coast Guard Station and the Westinghouse furniture plant located at a former blimp station; corporate tree farms were grouped with agricultural land uses. Besides the major employers already mentioned, others include: Weyerhaeuser Co., L. R. Foreman & Sons, Washington Forest, Inc., Supak & Sons Manufacturing Co., Elizabeth City Cotton Mill, Elizabeth City Hosiery, and Elizabeth City Iron Works.

Roads and Utilities

Pasquotank County has a total of about 250 miles of state-maintained roads, 24 percent (60.3 miles) of which are unpaved. The major federal primary highways, Routes 158 and 17, account

for 16 percent of the total road mileage. North-south travel is heavily constrained by large bodies of water surrounding the southern half of the county and the location of Dismal Swamp. Consequently all through traffic gets routed over U. S. Highway 17 which must "dogleg" through Elizabeth City before heading north. At present the unwidened portion of U. S. Highway 17 North below Morgan's Corners accounts for the area's highest accident and fatality rate. (Tables 12 and 13) The significance of road widening is apparent from the records of fatalities along Route 17. During an eight year period from 1966 through 1973, fatalities along this route accounted for slightly more than half of all county fatalities--19 of 37. Seven of these fatalities occurred along U. S. 17 South before 1970 when this road was widened from two to four lanes. This has fallen to two fatalities since then. However, since 1970 fatalities along U. S. 17 North have risen to eight compared to two along this same segment of road during the preceding four years. Highway improvements have also led development besides improving traffic safety. This is indicated by differences in average daily traffic (ADT) counts at key intersections during the two year period, 1972-73.

Table 12

MILEAGE OF STATE MAINTAINED ROADS BY TOWNSHIP
Pasquotank County, N. C.

Township	Paved	Unpaved	Total	Primary Highway
Newland	36.2 mi.	11.6 mi.	47.8 mi.	10.7 mi.
Providence	31.4	8.8	40.2	8.5
Elizabeth City*	15.2	2.1	17.3	5.8
Mt. Hermon	34.8	12.9	47.7	5.2
Nixonton	41.3	11.8	53.1	0.0
Salem	30.7	13.1	43.8	0.0
Totals	189.6	60.3	249.9	30.2

Source: NCDOT Pasquotank County Highway Maintenance Map, 1972.

*Note: Figures for Elizabeth City do not include city-maintained streets.

Table 13

ACCIDENT CHARACTERISTICS AT SELECTED INTERSECTIONS*
Pasquotank County, N. C.

Intersection	Personal Injury	Property Damage
U.S. 158/U.S. 17 (Morgan's Corners)	3	6
U.S. 17/N.C. 1333	4	17
U.S. 17 South & U.S. 17 Business	5	3

Source: North Carolina State Highway Patrol

*Note: The reporting period for these figures is 1 Jan. 74-31 May 74.

PASQUOTANK COUNTY

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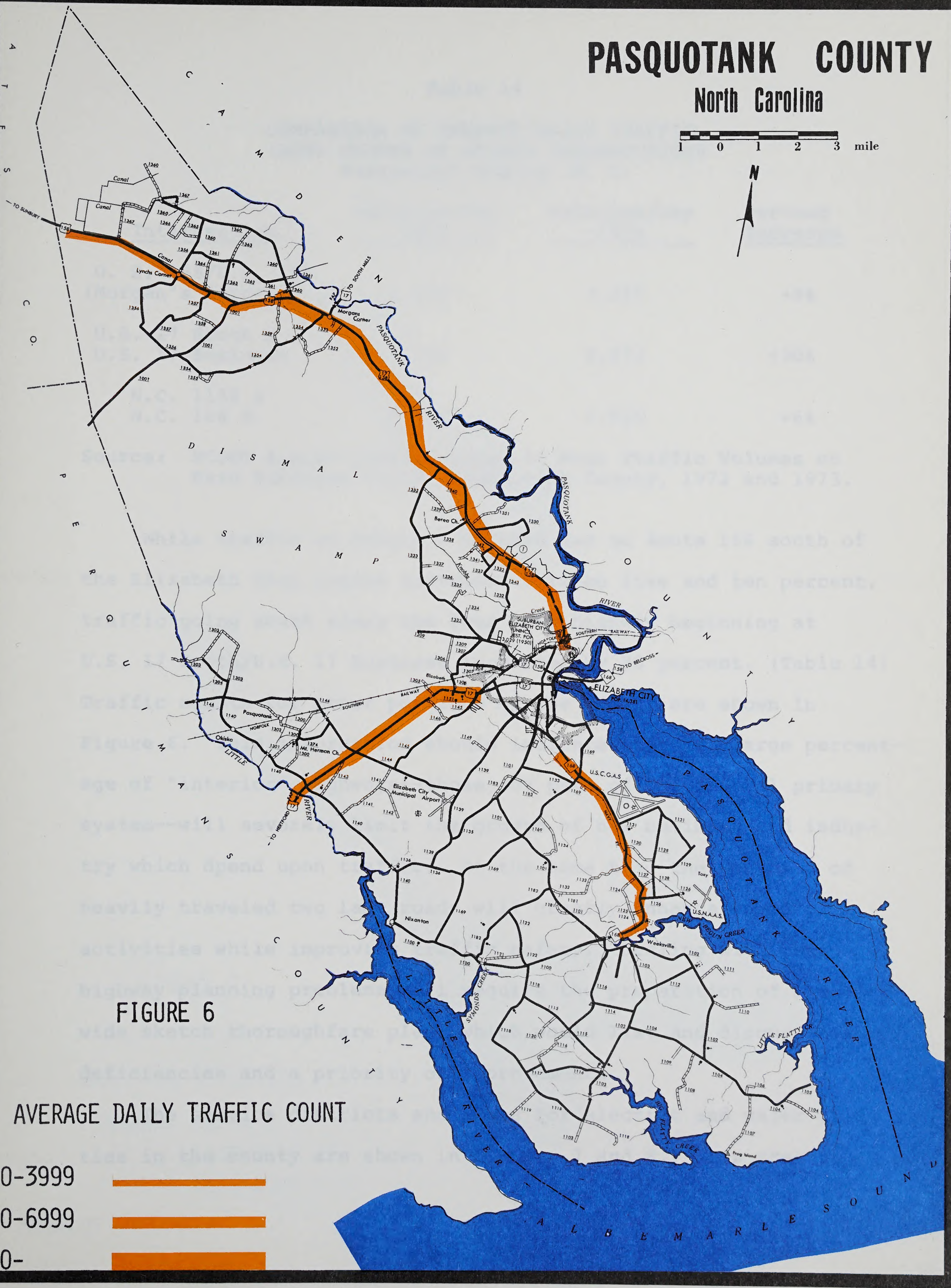


FIGURE 6

Table 14

COMPARISON OF AVERAGE DAILY TRAFFIC
(ADT) COUNTS AT SELECT INTERSECTIONS
Pasquotank County, N. C.

Intersection	Vehicles/Day 1972	Vehicles/Day 1973	Percent Increase
U. S. 158/U.S. 17 (Morgan's Corners)	4,000	4,355	+9%
U.S. 17 South & U.S. 17 Business	7,300	9,475	+30%
N.C. 1152 & N.C. 168 S.	5,600	5,955	+6%

Source: NCDOT Annual Average Daily 24 Hour Traffic Volumes on Hard Surfaced Roads, Pasquotank County, 1972 and 1973.

While traffic at Morgan's Corners and on Route 168 south of the Elizabeth City limits increased between five and ten percent, traffic going south along the four lane highway beginning at U.S. 17 South/U.S. 17 Business increased by 30 percent. (Table 14) Traffic counts for other portions of the county are shown in Figure 6. This information should indicate that the large percentage of "interior" highways--those not part of the federal primary system--will severely limit the growth of new business and industry which dpend upon traffic. At the same time the widening of heavily traveled two lane roads will greatly enhance commercial activities while improving traffic safety. Dealing with these highway planning problems will require the preparation of a county wide sketch thoroughfare plan, which would list and discuss highway deficiencies and a priority of improvements.

The service districts and lines for electric and water utilities in the county are shown in Figures 7 and 8. This area is

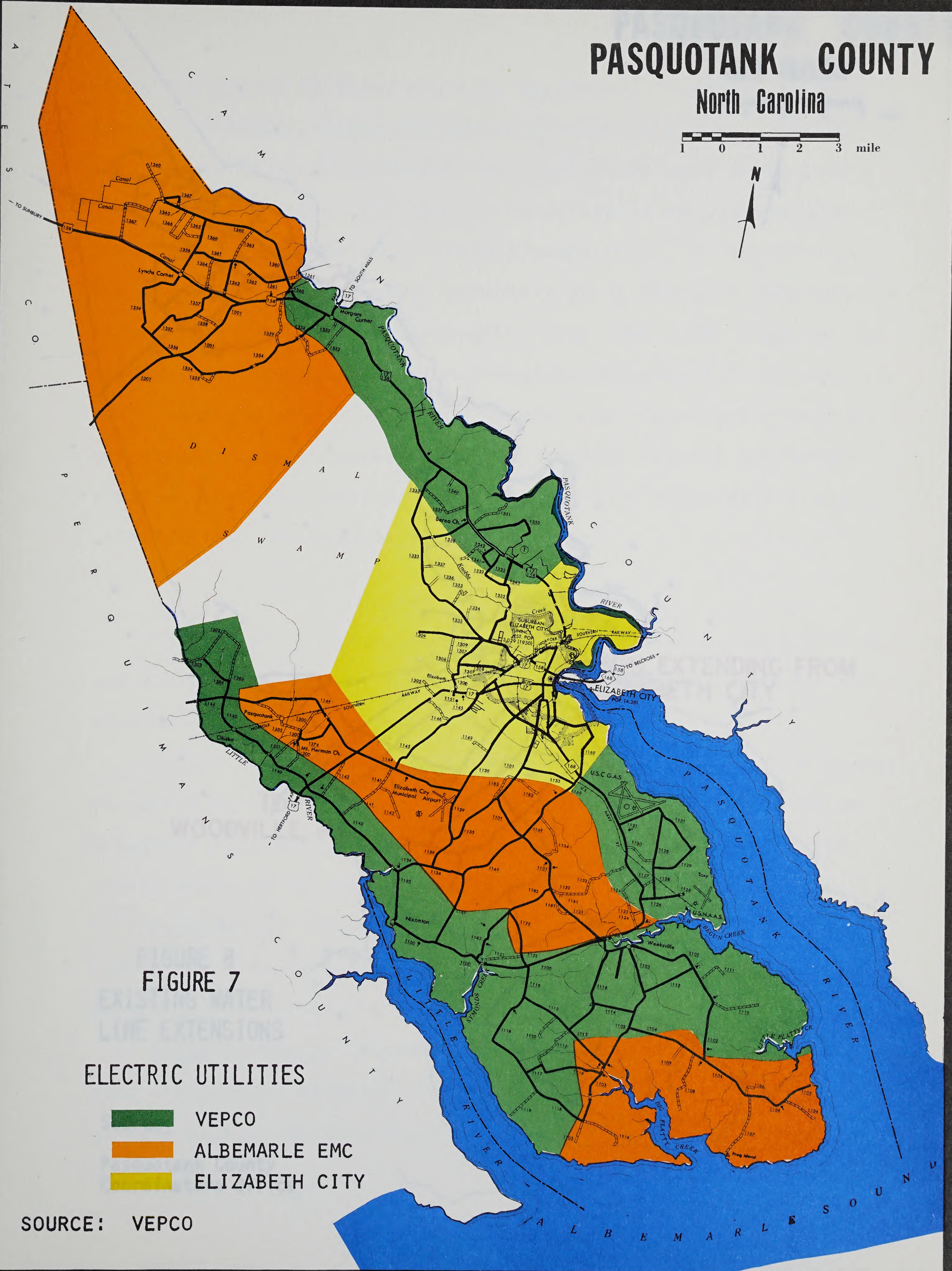


FIGURE 7

ELECTRIC UTILITIES

🟩 VEPCO

🟧 ALBEMARLE EMC

🟨 ELIZABETH CITY

SOURCE: VEPCO

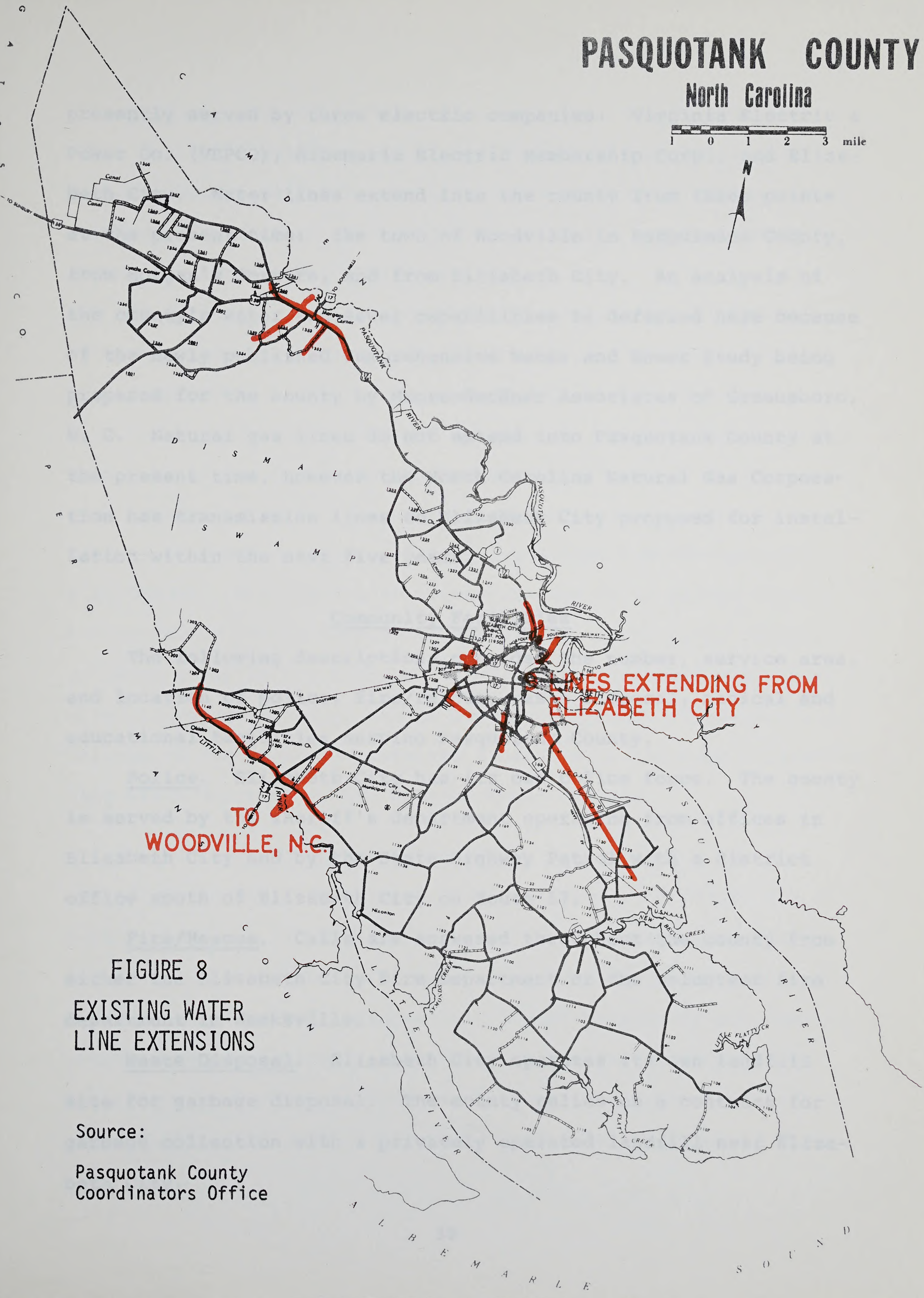


FIGURE 8

EXISTING WATER LINE EXTENSIONS

Source:

Pasquotank County Coordinators Office

presently served by three electric companies: Virginia Electric & Power Co. (VEPCO), Albemarle Electric Membership Corp., and Elizabeth City. Water lines extend into the county from three points at the present time: the town of Woodville in Perquimans County, from Morgan's Corners, and from Elizabeth City. An analysis of the county's water and sewer capabilities is deferred here because of the newly published Comprehensive Water and Sewer Study being prepared for the county by Moore-Gardner Associates of Greensboro, N. C. Natural gas lines do not extend into Pasquotank County at the present time, however the North Carolina Natural Gas Corporation has transmission lines to Elizabeth City proposed for installation within the next five years.

Community Facilities

The following descriptions consider the number, service area, and location of police, fire/rescue, waste disposal, medical and educational facilities serving Pasquotank County.

Police. Elizabeth City has its own police force. The county is served by the sheriff's department operating from offices in Elizabeth City and by the State Highway Patrol with a district office south of Elizabeth City on Route 17.

Fire/Rescue. Calls are answered throughout the county from either the Elizabeth City Fire Department or the volunteer fire department in Weeksville.

Waste Disposal. Elizabeth City operates its own landfill site for garbage disposal. The county relies on a contract for garbage collection with a privately operated landfill near Elizabeth City.

Medical. Elizabeth City contains a four-county area District Health Department, County Health and Welfare Clinics and District Mental Health Center offering a variety of out-patient services, in addition to the 152 bed Albemarle Hospital which serves the surrounding five counties.

Educational. Public school facilities serving Elizabeth City and Pasquotank County are almost entirely within the Elizabeth City limits. This would include four elementary schools and two junior high schools. There is also one private school in the area with grades 1 thru 12 and two parochial schools in the area with grades 1 thru 8. Just outside the city limits near U. S. Highway 17 South is Central Elementary School and Northeastern High School. One additional elementary school is in Weeksville. A City-County Public Library is also in Elizabeth City, serving outlying areas with a bookmobile. Two state colleges and one private college are also in the Elizabeth City area. These are the College of the Albemarle with two locations in the city, Elizabeth City State University, and Roanoke Bible College.

Historic and Recreational Land Uses

Historic and recreational areas in Pasquotank County are almost entirely in Elizabeth City. (Figure 9) Historic buildings and areas in the rural parts of the county have fallen into ruin or have gone unmarked. Archeologic investigations in surrounding counties have unearthed a variety of Indian relics, but no remnants have been found in Pasquotank County. However, a fine display of maps, artifacts, and exhibits of historic interest from

FIGURE 9

HISTORIC SITES AND RECREATIONAL AREAS

LEGEND

1. DISMAL SWAMP
2. SITE OF CULPEPPER REBELLION
3. MUSEUM OF THE ALBEMARLE
4. SUNKEN CONFEDERATE SCHOONER, "BLACK WARRIOR"
5. FIRST ASSEMBLY IN NORTH CAROLINA
6. FIRST SCHOOL IN NORTH CAROLINA
7. BIRTHPLACE OF PROFESSOR STEPHEN WEEKS, HISTORIAN
8. HOME OF JUDGE GEORGE BROOKS
9. BIRTHPLACE OF GOVERNOR J. B. EHRINGHAUS IN ELIZABETH CITY. ALSO THE LOCATION OF HISTORICALLY INTERESTING STRUCTURES AND A VARIETY OF RECREATIONAL ACTIVITIES.
10. FIRST COURTHOUSE SITE.
11. SITE OF FIRST BAPTIST CHURCH IN COUNTY.
12. OLDEST DEED IN NORTH CAROLINA. ALSO SITE OF EARLIEST CHURCH OF ENGLAND, CIRCA 1700.
13. FIRST METHODIST CHURCH IN COUNTY.
14. SITE OF OLD QUAKER MEETING HOUSE.

Sources: USDA-SCS, An Appraisal of Potential for Outdoor Recreation: Pasquotank County, North Carolina, 1972.

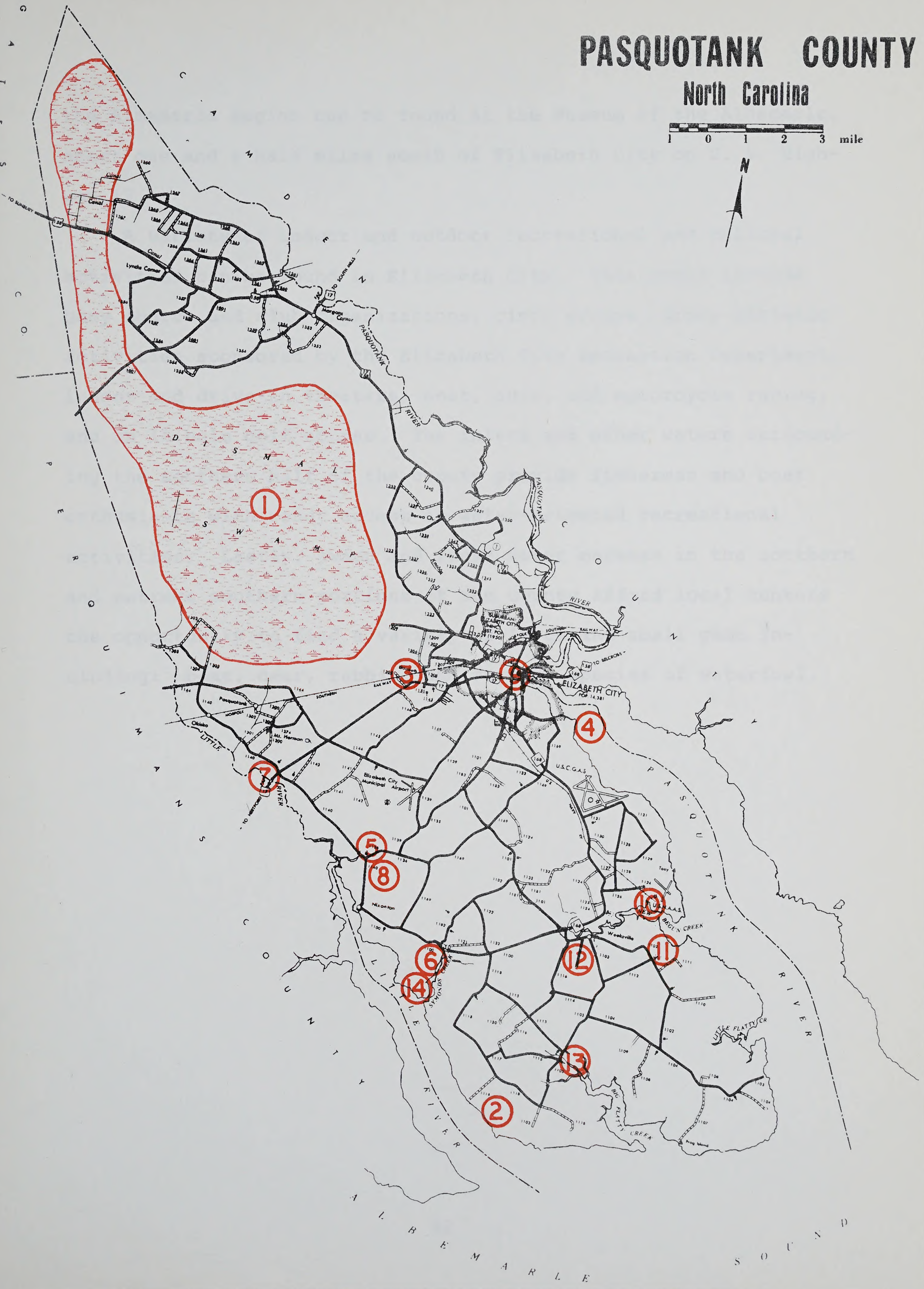
Museum of the Albemarle, Highway 17, Pasquotank Co.

Fred P. Markham, III

Guide to North Carolina Historical Highway Markers, 6th Ed., N. C. Department of Archives and History, 1964

PASQUOTANK COUNTY

North Carolina



the Albemarle Region can be found at the Museum of the Albemarle, about one and a half miles south of Elizabeth City on U. S. Highway 17.

A variety of indoor and outdoor recreational and cultural activities can be found in Elizabeth City. This would include many church and club organizations, civic groups, group athletic activities sponsored by the Elizabeth City Recreation Department, indoor and drive-in theaters, boat, auto, and motorcycle racing, and an 18 hole golf course. The inlets and other waters surrounding the southern half of the county provide fisherman and boat enthusiasts with ready access to water-oriented recreational activities. Lastly, swamp and fresh water marshes in the northern and extreme southern portions of the county afford local hunters the opportunity to find a variety of large and small game including: bear, deer, rabbit, and several species of waterfowl.